



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 10**

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Reply To: OWW-130

**MEMORANDUM**

SUBJECT: PSNS Permit Chlorine Effluent Minimum Level

FROM: Susan Poulson  
Permit Writer

TO: File

Approved methods for total chlorine residual include 4500 B, C, D, E, F, G. (See Attachment 1 from 40 CFR 136.5)

The minimum detection level that Ecology uses is 10.0 µg/L (See Attachment 2 from Ecology Permit Writers Manual July 2008).

Saltwater data are expressed as chlorine-produced oxidants, although the term refers to the sum of free and combined chlorine and bromine as measured by the methods for "total residual chlorine." (See Attachment 3 from Ambient Water Quality Criteria for Chlorine – 1984 EPA 440/5-84-030)

The most sensitive method for chlorine detection is amperometric titrator (See Attachment 4 from NEIC email)

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